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ABSTRACT

This study examined links between racial diversity on college campuses and positive educational outcomes. Data came from the Cooperative Institutional Research Program database, a longitudinal set of student and faculty surveys and research that assessed the impact of college on students. This study used data from a 1985 freshman survey and the 1989 follow-up of the same students. The survey examined demographics, high school experiences, college expectations, values, attitudes, life goals, self-confidence, and career aspirations. The follow-up survey also asked students to reflect on their experiences and perceptions of college. Information on students' SAT scores, ACT scores, and educational attainment and on African American, Asian American, Hispanic, and White undergraduate student enrollment was collected. Several campus climate measures were merged with the data sets. Faculty data were collected from full-time teachers at the same institutions for which student information was available. Faculty discussed how they spent their time and interacted with students, teaching and evaluation methods, perceptions of institutional climate, and sources of stress and satisfaction. Overall, campus diversity had a small but significant positive impact on students' college experiences. Both socializing across racial lines and discussing issues of race were reported as positive educational experiences. (Contains 36 references.) (SM)

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CHAPTER 7

The Positive Educational Effects of Racial Diversity on Campus

MITCHELL J. CHANG

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Perspective

Does attending a college with a racially diverse population significantly enhance students' educational experiences? Does such diversity on campus create a richer environment for learning? These questions lie at the heart of one of the most contentious issues in higher education today: the use of race-conscious affirmative action in admissions.

Critics of affirmative action argue that diversity by itself has no significant educational benefits and is therefore not a legitimate goal. Moreover, the critics charge, race-conscious policies designed to promote diversity have serious negative effects, including lowering academic standards, "polarizing" campuses, and denying educational opportunities to "more deserving" white students—the "reverse discrimination" argument.

Some recent important judicial and policy decisions on affirmative action have taken note of this controversy. Both the Fifth Circuit Court of Appeals 1996 ruling in *Hopwood v. Texas* and the 1995 decision of the Regents of the University of California to eliminate race-conscious affirmative action were made in part on the grounds that there are no significant educational benefits to having a racially diverse student body.

The arguments on either side of this critically important issue have often been political, ethical, and ideological. Very little empirical research has asked whether there is indeed a direct link between diversity and positive educational outcomes.

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This paper represents one attempt to fill that gap. The data analyzed here, though hardly definitive, point unmistakably to the conclusion that campus diversity does indeed have a small but significant positive effect on students' experience of college. Moreover, they offer no support to the arguments of those who say that the results of efforts to promote diversity have been negative.

Research Objectives and Data Sources

Most educators view a diverse student body as an important educational resource, arguing that diversity creates a richer environment for learning (Rudenstine, 1996; Tien, 1996). Students are said to learn most from those who have very different life experiences from theirs (Sleeter & Grant, 1994). Diversity offers the potential, many educators believe, to challenge students and enrich the intellectual dialogue of the college community (Duster, 1993; Moses, 1994). Further, having a racially diverse campus is seen as a powerful way to teach students the realities of the multiracial world they will eventually be living and working in (Astone & Nuñes-Wormack, 1990; Hall, 1981; Tierney, 1993).

Research by Astin (1993b) and Villalpando (1994) found that emphasizing "multiculturalism" through ethnic studies courses, cultural awareness workshops, cross-racial socialization, and discussion of racial issues—to name just a few campus activities—is associated with widespread beneficial effects on a student's academic and personal development, irrespective of the student's race. Their studies, however, did not directly link the level of diversity on campus with these positive effects. The purpose of the study described here was to ask if such a link exists, by measuring the impact of having a racially mixed student population on students' likelihood of socializing with those of different racial or ethnic groups and of discussing issues of race and ethnicity.

This study draws on several major data sources. The primary source of student data is the Cooperative Institutional Research Program (CIRP) database. CIRP is a longitudinal set of very large student and faculty surveys and research, sponsored by the American Council on Education and the Higher Education Research Institute (HERI) at UCLA. The database is designed to assess the impact of college on students, and is generally considered the most comprehensive collection of information on higher education. The CIRP data used in this study included information from two surveys: the 1985 freshman survey and the 1989 follow-up survey of the same college class in their senior year.[1]

The 1985 survey was administered to new college freshmen during orientation programs and in the first few weeks of fall classes. It included information on students' personal and demographic characteristics, high school experiences, and expectations about college, as well as their values, attitudes, life goals, self-confidence, and career aspirations. The survey was completed by 192,453 first-time full-time freshmen at 365 four-year colleges and universities.[2]

Four years later, in the summer and fall of 1989, the follow-up survey was sent to the home addresses of a sample of the 1985 respondents. The 1989 survey repeated the earlier one's questions on values, attitudes, life goals, self-confidence, and career aspirations. It also asked students to reflect on their experiences and perceptions of college. More than 86,000 students were contacted; approximately 30 percent of them responded. The final sample yielded 18,188 students attending 392 four-year colleges and universities. This sample was statistically adjusted for nonresponse and weighted to approximate the national population of students.[3]

Also included in the data set was information on students' SAT and ACT scores, provided by the Educational Testing Service and the American College Testing Program.[4] The 1989 HERI Registrar's Survey provided additional information on which students had earned bachelor's degrees, which were still enrolled in college, and how many years of college each student had completed. These data were linked with the surveys to form a database designed to assess a wide range of student experiences and undergraduate achievements and to provide longitudinal data for studying how different college environments influence student development. Institutional characteristics (size, type, and so on) and undergraduate ethnic enrollments from 1986, both obtained from the data files of the U.S. Department of Education's Integrated Post-Secondary Data System (IPEDS), were merged with student survey data.

The IPEDS enrollment figures for African American, Asian American, Latino, and white undergraduate students were used to create the measure of campus diversity.

Finally, several campus climate measures were developed from responses to the 1989 HERI Faculty Survey and merged with the data sets. The faculty data were collected from full-time teaching personnel at 212 of the same institutions for which longitudinal student data were available. The survey asked faculty members to describe how they spent their time, how they interacted with students, what teaching practices and evaluation methods they used, their perceptions of the institution's climate, and their sources of stress and satisfaction, as well as demographic and biographical questions.[5]

Defining "Racial Diversity"

Although previous research has examined how college students are affected by "racial diversity" (Allen, 1985, 1992; Astin, 1993a; Hsia & Hirano-Nakanishi, 1989; Hurtado, 1992; Pascarella & Terenzini, 1991), there is little consensus on what constitutes a racially diverse student population. Conventional approaches equate color with diversity; that is, the more nonwhites on campus, the more "diverse" the student body. This approach fails to measure heterogeneity, and thus fails to address the educational rationale for maintaining race-conscious admissions practices—namely, that diversity enriches education because students learn most from those who have very different life experiences from their own.

I therefore designed a measure to assess an institution's ability to provide opportunities for all students to interact with others from different racial groups. Percentages of students from different major racial groups were combined to create an overall measure that equates diversity with heterogeneity. The formula, similar to that used for calculating standard deviation, is

$$\sqrt{\frac{(A-m)^2 + (L-m)^2 + (B-m)^2 + (W-m)^2}{4}}$$

where A is the percentage of Asian American students, L is the percentage of Latinos, B is the percentage of blacks, W is the percentage of whites at each particular instituion, and m is the mean, or overall average, of A, L, B, and W across all instituions. This formula yields an inverse measure (the greater the differences from the mean, the less diversity), so the reciprocal of this value was used as the index of diversity.

In effect, this variable measures the variance across all four racial and ethnic groups. For example, if the percentages of the four groups were very similar (e.g., 25%, 25%, 30%, and 20%) at a particular institution, it would have a very low standard deviation, and thus a high index of diversity—in this case, 0.28. If, on the other hand, the percentages were widely disparate (e.g., 80%, 5%, 0%, and 15%) it would have a large standard deviation and a low index of diversity—in this case, 0.03. In this way, I attempted to define racial diversity as an institution's ability to offer opportunities for maximizing cross-racial interaction for all students.

Research Design

This study uses the Input-Environment-Outcome (I-E-O) methodological framework developed by Astin (1991) for assessing the impact of college

TABLE 1 *Input and Outcome Measures*

Freshman Racial Attitudes (From 1985 Freshman Survey)	*Outcome Measures (From 1989 Follow-Up Survey)*
Views[a]	*Frequency with which students*[b]
"Busing is O.K. to achieve racial balance in the schools."	Socialized with persons from different racial/ethnic groups
"Realistically, an individual can do little to bring about changes in society."	Discussed racial/ethnic issues
Importance of Goals[c]	
Helping to promote racial understanding	
Influencing social values	

[a] Coded as a four-point scale: 4 = "Agree strongly" to 1= "Disagree strongly."
[b] Coded as a three-point scale: 3 = "Frequently" to 1 = "Not at all."
[c] Coded as a four-point scale: 4 = "Essential" to 1 = "Not important."

environmental variables on student outcomes. According to Astin, the impact of the environment, in this case racial diversity, on specific student outcomes is best observed after controlling for student characteristics measured at college entrance.

Four characteristics of entering freshmen reflecting their views and goals regarding racial or ethnic issues were selected as measures of their racial orientation and were controlled when examining the effects of racial diversity on student behavior as measured four years later (see Table 1). Two outcome measures were selected from the 1989 follow-up survey to examine the effects of racial diversity: the frequency with which students socialized with those of different racial or ethnic backgrounds, and the frequency of their having discussions of racial or ethnic issues. Both of these activities have been shown by earlier research to be associated with students' academic and personal development (Astin, 1993b; Villalpando, 1994).

Researchers have long emphasized the importance of controlling student background characteristics when interpreting the impact of the college environment on outcomes (Astin, 1977; Feldman & Newcomb, 1969; Pascarella & Terenzini, 1991). Because the distribution of students across different college environments is never random, a number of student characteristic, college environment, and student involvement measures were selected as additional controls for this study. Socioeconomic status,

race, gender, and measures of student ability have been shown to be consistent predictors of a variety of educational outcomes (Astin, 1982; Featherman & Hauser, 1978; Ortiz, 1986; Pascarella & Terenzini, 1991); this study controls for these differences.

In addition, several college characteristics served as controls to help identify how the effects of racial diversity might vary according to campus environment, following the practice of earlier researchers (Astin, 1977, 1991, 1993a; Pascarella & Terenzini, 1991; Weidman, 1989). These included variables considered important for understanding racial climates on campus: institutional size, location, type, religious affiliation, gender (coed or single-sex), and selectivity. Other measures of peer-group characteristics and faculty environment that have been shown to be important in determining educational outcomes (Astin, 1993a; Astin & Chang, 1995; Hurtado, 1990; Pascarella & Terenzini, 1991) were also included for analysis.

Lastly, a set of variables that measured students' direct involvement and experiences with their institutions was selected from the 1989 follow-up survey. These items were designed to examine variations in students' experiences within individual campuses, and included activities such as enrolling in an ethnic studies course, attending a racial or cultural awareness workshop, being a member of a fraternity or sorority, working full-time while attending college, taking part in intercollegiate or intramural sports, being elected to student government, participating in campus protests or demonstrations, working on a group project for a class, and so on. These particular measures were chosen because they are known to affect some of the outcomes used in this study (Astin, 1977, 1993a; Hurtado, 1990) and are believed to "mediate" the effects of racial diversity (Astin, 1993b).

Analysis and Findings

The various measures of students' initial attitudes and outcomes were combined with all of the control variables in a statistical analysis designed to isolate the effects of racial diversity on the two specified outcomes—the development of interracial friendships and the frequency of discussing racial issues. This analysis was done in relation to 1) student background characteristics, 2) the campus racial diversity measure, 3) other campus characteristics, and 4) intermediate outcomes. Because this model requires a temporal arrangement of variables, college experiences were treated as intermediate outcomes; that is, they occurred after the student's initial exposure to the college environment but while the student was still in college. Variables were entered in the above four-stage se-

TABLE 2 *Student Socialization and Discussion of Racial Issues as a Function of Campus Diversity*

		Racial Diversity		
Student Outcomes	Simple *r*	ß1	ß2	ß3
Socialized with someone of a different race	.16***	.11***	.12**	.12**
Discussed racial issues	.08***	.05***	.04**	.02*

ß1 represents the standardized regression coefficient after controlling for student background characteristics.

ß2 represents the standardized regression coefficient after controlling for institutional, peer, and faculty characteristics.

ß3 represents the final standardized regression coefficient.

* $p < .014$, ** $p < .001$, *** $p < .0005$

quence to observe changes in regression coefficients. To determine if the effects of racial diversity made a unique contribution, beyond the effects of other variables, Beta coefficients for the racial diversity measure were observed after controlling for student background and college environment, and again after controlling for intermediate outcomes.

The simple statistical correlations for the racial diversity measure and the two outcomes are .16 and .08 (see Table 2). The last three columns in Table 2 show the corresponding correlations after controlling for student background, college environment, and college experiences. The results show that multiracial diversity is a significant, though not strong, positive predictor of students' likelihood of forming interracial friendships and talking about race and ethnicity, even after students' background and campus environment are taken into account.

One could argue that participating in these two outcome activities is in itself a positive experience. More important, however, is that these experiences have been shown to be associated with beneficial effects on students' academic and personal development, regardless of their race (Astin, 1993b; Villalpando, 1994). To verify these effects, additional analyses were conducted on four educational outcomes: retention, satisfaction with college, intellectual self-confidence, and social self-confidence. These outcomes resemble the measures most often used in "racial diversity" studies (Astin, 1993a, 1993b; Hurtado, 1990). Moreover, these outcome measures have corresponding pretest measures that were selected from the 1985 freshman survey (see Table 3).

TABLE 3 *Educational Outcome Measures*

Outcome Measures (1989 Follow-Up Survey)	*Pretests (1985 Freshman Survey)*
Self-Concept	
Academic Self-Concept[a]	Academic Self-Concept
Self-Rating: "intellectual self-confidence"	Identical Self-Rating
Social Self-Concept[a]	Social Self-Concept
Self-Rating: "social self-confidence"	Identical Self-Rating
Retention	
Student Persistence:	Students' best guess as to the chances they will:[c]
Earned a bachelor's degree or above	Drop out temporarily
Student did not withdraw, transfer, or take a leave of absence	Earn a BA
College Satisfaction	
Overall college satisfaction rating[b]	Students' best guess as to the chances they will be satisfied with college[c]

[a] Coded as a 5-point scale: 5 = Highest 10% to 1 = Lowest 10%.
[b] Coded as a 4-point scale: 4 = Very Satisfied to 1 = Dissatisfied.
[c] Coded as a 4-point scale: 4 = Very Good Chance to 1 = No Chance.

This further analysis shows that socializing with someone of another racial group is positively related to all four educational outcomes, and that these relationships remained significant even after institutional, peer, and faculty variables were controlled (see Table 4).

But when the effects of other intermediate outcomes were controlled, only the effects on satisfaction with college and social self-confidence remained significant.[6] Thus, socializing with someone of another race appears to have direct effects on two of these educational outcomes, and indirect effects on the other two. Likewise, the experience of talking about racial issues shows significant positive effects on all four outcomes, even after controlling for student background and college environment. When intermediate outcomes were controlled, however, only one of these outcomes, intellectual self-confidence, remained significant.[7]

In sum, these findings strongly suggest that both socializing across racial lines and discussing issues of race are positive educational experi-

TABLE 4 *Educational Outcomes as a Function of Students' Experiences*

	Socialize				*Discuss*			
Student Outcome	Simple *r*	ß1	ß2	ß3	Simple *r*	ß1	ß2	ß3
Retention	.06*	.04*	.04*	.00	.07*	.04*	.03*	.00
Satisfaction with College	.10*	.09*	.08*	.05*	.11*	.07*	.05*	.00
Intellectual Self-Concept	.08*	.03*	.03*	.01	.10*	.06*	.06*	.05*
Social Self-Concept	.10*	.07*	.06*	.04*	.09*	.05*	.04*	.02

ß1 represents the standardized regression coefficient after controlling for student background characteristics.

ß2 represents the standardized regression coefficient after controlling for institutional, peer, and faculty characteristics.

ß3 represents the final standardized regression coefficient.

* $p < .0005$

ences. Because racial diversity on campus increases the likelihood of students' having these experiences, I conclude that diversity has educational benefits in college.

Implications for Policymakers

Attending college with those of other races and ethnicities increases the likelihood that students will socialize across racial lines and talk about racial matters. The more diverse the student body, the more likely that these activities will take place. In turn, these activities have a positive impact on student retention, overall college satisfaction, and intellectual and social self-confidence among all students. Though racial diversity alone does not appear to directly affect every one of these educational outcomes, it very likely affects all of them indirectly.

The statistical correlations found in this study are relatively small, but they are significant—not simply in the mathematical sense but also because they exist at all. Critics of affirmative action in college admissions maintain that diversity has no benefit in itself and that efforts to promote it are counterproductive of positive race relations. This study suggests that these critics are wrong, that campuses where diversity has flourished,

largely through the impact of affirmative action, confer significant educational benefits on their students.

Given what we know about the racial climate on U.S. campuses and the corrosive forces in society at large that impede dialogue and understanding, even a small positive impact may be extremely important. The modest benefits we see in this study could perhaps be much larger if policymakers choose to move the clock forward instead of turning it back.

Notes

1. The sample used in this study did not include historically black institutions because the controversy over affirmative action in admissions has ignored these institutions (Hacker, 1992). This is not surprising, as their mission, clientele, and history vastly differ from those of predominantly white institutions (Allen, 1987, 1992; Davis, 1991; Fleming, 1984; Jackson & Swan, 1991; Nettles, 1991; Willie, 1981). Because this study sought to inform the use of affirmative action, it was reasonable to limit the sample in this way. Likewise, this study did not include community colleges because the sample size for that group was too small.
2. See Astin, Green, Korn, and Shalit (1985) for a copy of the survey and a complete description of the sampling procedure.
3. See Higher Education Research Institute (1991) for a copy of the survey and a complete description of the sampling and weighting procedures.
4. ACT scores were converted into equivalent SAT scores by HERI.
5. For detailed information on the Faculty Survey (implementation, sampling, and weighting) see Astin, Korn, and Dey (1990).
6. It is difficult to interpret whether socializing with someone of another racial or ethnic group has a "direct" effect on retention and intellectual self-concept because this particular experience is also an intermediate outcome and a temporal arrangement among intermediate outcomes cannot be established.
7. The same problem described in the preceding footnote applies here.

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